

Name

Key

Date

Review 6.1-6.3.

Do the following problems from the book. p337-338 #s 11, 12, 13 (follow directions below), 15-17, 20, 22, 24-26, 28, 29.

11. Graph the equation from the book. Label and graph everything listed below.

16-32 + 7  
 $\sqrt{(4, -9)}$   $f(x) = x^2 - 8x + 7$

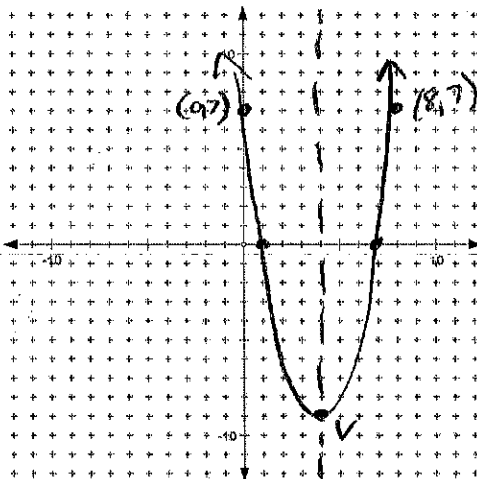
Axis of Symmetry  $x = 4$   $\frac{+8}{2}$

y-intercept  $(0, 7)$

Mirrored point  $(8, 7)$

Another point  $(1, 0)$   $1 - 8 + 7$

Mirrored point  $(7, 0)$



12. Graph the equation from the book. Label and graph everything listed below.

$\sqrt{(3, 9)}$   $f(x) = -2(x^2) + 12x - 9$

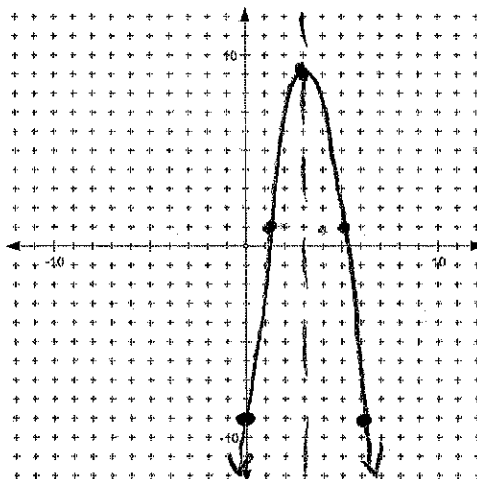
Axis of Symmetry  $x = 3$

y-intercept  $(0, -9)$

Mirrored point  $(6, -9)$

Another point  $(1, 1)$

Mirrored point  $(5, 1)$



13. Graph the equation from the book. Label and graph everything listed below.

$\sqrt{(2, 1)}$   $f(x) = -x^2 - 4x - 3$

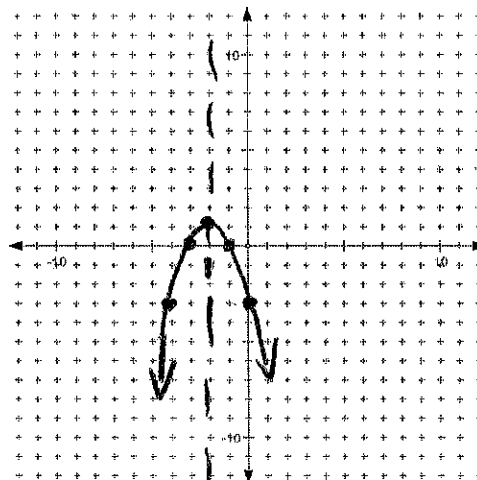
Axis of Symmetry  $x = -2$

y-intercept  $(0, -3)$

Mirrored point  $(-4, -3)$

Another point  $(-1, 0)$

Mirrored point  $(-3, 0)$



15-17 20, 22, 24-26, 28, 29

15.  $f(x) = 4x^2 - 3x - 5$

$\text{Min.}$   $\frac{3}{8}$   
 $4(\frac{3}{8})^2 - 3(\frac{3}{8}) - 5$   
 $= -\frac{89}{16}$

16.  $f(x) = -3x^2 + 2x - 2$

$\frac{-2}{2(-3)} = \frac{1}{3}$   
 $\text{Max}$   
 $-\frac{5}{3}$   
 $-3(\frac{1}{3})^2 + 2(\frac{1}{3}) - 2$

17.  $f(x) = -2x^2 + 7$

$\text{Max; } 7$   $\frac{0}{-4} = 0$   
 $-2(0)^2 + 7$

22.  $-3x^2 - 6x - 2 = 0$

$\{-1.577, -.423\}$

20.  $2x^2 + x - 3 = 0$

$\{1, -\frac{3}{2}\}$

(24)

$x^2 - 4x - 32 = 0$

$(x+4)(x-8) = 0$

$x = -4 \quad x = 8$

$\{-4, 8\}$

25.  $3x^2 + 6x + 3 = 0$

$\frac{9}{3} \times \frac{3}{6}$

$3x^2 + 3x + 3x + 3$

$3x(x+1) + 3(x+1) = 0$

$(3x+3)(x+1)$

$x = -1$

$\{-1\}$

28.  $25x^2 - 30x + 9 = 0$

$(5x-3)^2 = 0$

$x = \frac{3}{5}$

$\{\frac{3}{5}\}$

(26)

$5y^2 = 80$

$y^2 = 16$

$y = \pm 4$

$\{-4, 4\}$

(29)

$6x^2 + 7x - 3 = 0$

$6x^2 + 9x - 2x - 3 = 0$

$3x(2x+3) - 1(2x+3) = 0$

$(3x-1)(2x+3)$

$\{\frac{1}{3}, -\frac{3}{2}\}$

$\frac{18}{9} \times \frac{-2}{7}$